

## 4.17 SHOCK SUPPRESSORS (SNUBBERS)

### SURVEILLANCE REQUIREMENTS

4.17.1 Each snubber shall be demonstrated OPERABLE by performance of the following inspection program.

a. Snubber Types

As used in this specification, type of snubber shall mean snubbers of the same design and manufacturer, irrespective of capacity.

b. Visual Inspections

Snubbers are categorized as inaccessible or accessible during reactor operation and may be treated independently. The TMI-1 Manager, Radiological Controls, will ensure that a review is performed for ALARA considerations on all snubbers which are located in radiation areas for the determination of their accessibility. This review shall be in accordance with the recommendations of Regulatory Guides 8.8 and 8.10. The determination shall be based upon the known or projected radiation levels at each snubber location which would render the area inaccessible during reactor operation and based upon the expected time to perform the visual inspection. Snubbers may also be determined to be inaccessible because of their physical location due to an existing industrial safety hazard at the specific snubber location. This determination shall be reviewed and approved by the Supervisor of Safety and Health.

Snubbers accessible during reactor operation shall be inspected in accordance with the schedule stated below. Snubbers scheduled for inspection that are inaccessible during reactor operation because of physical location or radiation levels shall be inspected during the next reactor shutdown greater than 48 hours where access is restored\* unless previously inspected in accordance with the schedule stated below.

Visual inspections shall include all safety related snubbers and shall be performed in accordance with the following schedule:

<u>No. Inoperable Snubbers of Each Type Per Inspection Period</u>	<u>Subsequent Visual Inspection Period **#</u>
0	18 months + 25%
1	12 months + 25%
2	6 months + 25%
3, 4	124 days + 25%
5, 6, 7	62 days + 25%
8 or more	31 days + 25%

\* Snubbers may continue to be inaccessible during reactor shutdown greater than 48 hours (e.g. if purging of the reactor building is not permitted).

\*\* The inspection interval for each type of snubber shall not be lengthened more than one step at a time unless a generic problem has been identified and corrected; in that event the inspection interval may be lengthened one step the first time and two steps thereafter if no inoperable snubbers of that type are found.

# The provisions of Table 1.2 are not applicable.

## SHOCK SUPPRESSORS (SNUBBERS)

### SURVEILLANCE REQUIREMENTS (Continued)

#### c. Refueling Outage Inspections

At least once each refueling interval during shutdown, a visual inspection shall be performed of all safety related snubbers attached to sections of safety system piping that have experienced unexpected, potentially damaging transients as determined from a review of operational data and a visual inspection of the system.

#### d. Visual Inspection Acceptance Criteria

Visual inspections shall verify: (1) that there are no visible indications of damage or impaired operability and (2) attachments to the foundation or supporting structure are secure. Snubbers which appear inoperable as a result of visual inspections may be determined OPERABLE for the purpose of establishing the next visual inspection interval, provided that: (1) the cause of the rejection is clearly established and remedied for that particular snubber and for other snubbers that may be generically susceptible, and (2) the affected snubber is functionally tested in the as found condition and determined OPERABLE per Specification 4.17-1f. When the reservoir outlet port of a snubber is found to be uncovered by fluid, the snubber shall only be declared operable if functional testing in both extension and retraction directions is satisfactory and an engineering evaluation concludes that this snubber is operable.

#### e. Functional Tests\*

At least once each refueling interval during shutdown, a representative sample of snubbers shall be tested using one of the following sample plans. The sample plan shall be selected prior to the test period and cannot be changed during the test period. The NRC Regional Administrator shall be notified in writing of the sample plan selected prior to the test period, or the sample plan used in the prior test period shall be used:

- 1) At least 10% of the total of each type of snubber in use in the plant shall be functionally tested either in-place or in a bench test. For each snubber of a type that does not meet the functional test acceptance criteria of Specification 4.17.1f, an additional 10% of that type of snubber shall be functionally tested until no more failures are found or until all snubbers of that type have been functionally tested; or

\*The four 550,000 lb reactor coolant pump snubbers are not included. However, a functional test program for reactor coolant pump snubbers will be developed by Cycle 6 refueling or July 1, 1985, whichever is earlier. The functional test program for reactor coolant pump snubbers will be implemented in accordance with the schedule and other requirements of that program.

SHOCK SUPPRESSORS (SNUBBERS)

SURVEILLANCE REQUIREMENTS (Continued)

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i. Snubber Seal Service Life Program

A snubber seal service life program shall be developed whereby the seal service life of hydraulic snubbers is monitored to ensure that the service life is not exceeded between surveillance inspections. The designated service life for the various seals shall be established based on engineering information. The seals shall be replaced so that the indicated service life will not be exceeded during a period when the snubber is required to be OPERABLE. The seal replacements shall be documented and the documentation shall be retained in accordance with Specification 6.10.2.m. The program shall be fully implemented by startup following Cycle 7 refueling.

Snubber seal service life is evaluated via manufacturer input and information through consideration of the snubber service conditions and associated installation and maintenance records. The requirement to monitor the snubber seal service life is included to ensure that the seals periodically undergo a performance evaluation in view of their age and operating conditions. These records will provide statistical bases for future consideration of snubber seal service life. The requirements for the maintenance of records and the snubber seal service life are not intended to affect plant operation.

A technique and method for functional testing of the 550,000 lb. reactor coolant pump snubbers is currently under development. The functional test program shall be developed by Cycle 6 refueling or July 1, 1985, whichever is earlier. The functional test program shall be implemented in accordance with the schedule and other requirements of the program.

A list of individual snubbers with appropriate detailed information is maintained at the plant site. As a basis for permanent deletion of a snubber from the list of safety related snubbers, an engineering analysis must be performed to verify that the original safety analysis design criteria are either met or exceeded. Snubber additions and deletions are reported to the NRC in accordance with 10 CFR 50.59 requirements.